

## **CHAPTER 2: DESCRIPTION OF THE ALTERNATIVES**

### **Physical Setting of the Appalachian Trail on Saddleback Mountain**

The Saddleback Mountain range is a long, glacially polished ridgeline that extends in a southwesterly-to-northeasterly orientation across western Franklin County, Maine. It is considered to be one of Maine's premier mountain ranges, as well as one of the most spectacular scenic features of the entire Appalachian National Scenic Trail. Two of Maine's most prominent peaks – Saddleback Mountain and The Horn – are located within the range. The 13.4-mile section of the Appalachian Trail between Maine Highway 4 and Orbeton Stream has been located across these peaks and along the ridgeline of the mountain range since 1935, when it was first cut and blazed by the Civilian Conservation Corps.

Beginning at an elevation of approximately 1,600 feet above sea level at Maine Highway 4, the Appalachian Trail traverses in a northerly direction and ascends gradually to Piazza Rock, Ethel Pond, and Eddy Pond, before beginning a steep ascent of the southwestern ridge of Saddleback Mountain. The Trail reaches the alpine zone of Saddleback Mountain at an elevation of approximately 3,700 feet. The Trail continues a more gradual ascent above treeline, crossing a broad, open ridgeline to the summit of Saddleback Mountain at 4,116 feet. Northeast of the summit, the Trail crosses a false summit, then drops steeply to an elevation of 3,500 feet in a "saddle" or col before climbing steeply again to the summit of The Horn at 4,023 feet. This 2.5-mile stretch through the alpine zone of Saddleback Mountain offers a hiking experience that is comparable only to a few locations in the eastern United States. East of The Horn, the Trail drops quickly to treeline, turns easterly, crosses the summit of Saddleback Junior (3,640 feet), and then descends steeply down Poplar Ridge to Orbeton Stream at an elevation of approximately 1,500 feet above sea level. Map 2.1 identifies many of the primary geographic and physical features of the Appalachian Trail across Saddleback Mountain.

The Saddleback massif contains some extraordinary natural features. Saddleback Mountain's glacially polished, exposed bedrock and unusual glacial erratics set it apart from the fels and rock fields that are prevalent on most of New England's highest peaks. Saddleback Mountain also contains an extensive alpine area along its 2.5-mile-long windswept ridgeline, which has been registered as Maine Critical Area No. 126 by the Maine State Planning Office. The alpine area is home to 19 different arctic-alpine species, ranking it third to Katahdin and Goose Eye Mountain in the number of arctic-alpine species that are found on a Maine mountain. In addition to supporting many rare alpine plant species, Saddleback supports some of the finest examples of krummholz found anywhere in New England. Krummholz, which is a zone of stunted and deformed tree growth resulting from severe environmental conditions, intermixes with dwarf shrub heath communities to form a transition zone between the alpine zone and the

# Physical Setting of the Appalachian Trail Across Saddleback Mountain



## LEGEND

Appalachian Trail

NPS Land

Saddleback Ski Area  
Ski runs

Existing

Proposed



Contour interval = 100'

0 2500 5000 Feet

Map 2.1

subalpine spruce-fir forest on the upper slopes of Saddleback Mountain and The Horn. The “saddle” between Saddleback Mountain’s summit and The Horn also is dominated by krummholz and subalpine spruce-fir forest intermingled with alpine-arctic communities. Krummholz species on Saddleback Mountain include balsam fir (*Abies balsamea*) krummholz, black spruce (*Picea mariana*) krummholz, and eastern larch (*Larix laricina*) krummholz.

Saddleback Mountain is also a prominent feature of the Rangeley Lakes region, which encompasses a large portion of Franklin and Oxford Counties in northwestern Maine. The region includes all or portions of 16 towns, unincorporated townships, and plantations. The Town of Rangeley, with a year-round population of approximately 975, provides the majority of services in the immediate area, including retail, restaurants, lodging, services, and entertainment. The region is known for its large expanses of undeveloped public and privately owned forestland and lakes. The majority of private land is owned by forest product companies, and forest products are still a dominant factor in the region’s economy. However, the region also has served for many years as a destination for tourists and seasonal residents. Recreational services based upon the attraction of the region’s magnificent lakes and mountains have gradually expanded the area’s appeal to hunters, anglers, hikers, snowmobilers, skiers, and tourists.

Saddleback Ski Area is located on the western slope of Saddleback Mountain in an area that is largely unseen from the Appalachian Trail. The existing ski area consists of five ski lifts (two double chairlifts and three T-bar lifts), 41 ski trails covering approximately 96 acres, a base lodge, a maintenance garage and other support buildings, and 56 condominium units. In 1989 and 1994, Saddleback Ski Area received preliminary approvals from the Maine Land Use Regulation Commission (LURC) for expansion of the ski area, including construction of four new ski lifts and six new ski trails. As part of its approval, LURC required Saddleback Ski Area to conduct additional studies to reduce visual impacts to the Appalachian Trail and adverse impacts to alpine and protected subalpine vegetation. At present, Saddleback Ski Area has not submitted these studies to LURC or begun construction of any new ski area facilities.

### **The Alternatives**

Four alternatives, representing four different protection alternatives for the Appalachian Trail, plus the “no-action” alternative, are described in detail below. These alternatives were developed for the purpose of comparing and evaluating the effects of alternative levels of protection for the Appalachian Trail. Each alternative represents a different balance between protection of the Appalachian Trail and potential ski area expansion, which could occur on lands outside (and in one alternative, inside) the corridor of land that would be acquired to protect the Appalachian Trail. These alternatives are based in part upon issues and concerns identified during scoping, in part upon information provided in resource analyses and studies conducted as part of this assessment, and in part upon alternatives that have been developed during 15 years of negotiations between the National Park Service and Saddleback Ski Area.

**Alternative #1: Preservation of the Existing A.T. Experience across Saddleback Mountain:**

This alternative, which the National Park Service proposed to Saddleback Ski Area in 1987, would ensure continuity of the Appalachian Trail footpath, protect most of the alpine and subalpine areas from further disturbance, protect the foreground view area as seen from the Appalachian Trail, and preserve the existing, undeveloped character of those lands that are key components of the visual landscape of the Appalachian Trail when viewed from the ridgeline of Saddleback Mountain. This alternative would include acquisition of a large tract of land west of Eddy Pond that, if developed, would be clearly visible from the southwestern end of the Saddleback Mountain ridgeline, and a large triangle of undeveloped land on the southeast side of Saddleback Mountain. (See Map 2.2.)

This alternative also would protect the Maine Critical Area and the “saddle bowl” between Saddleback Mountain and The Horn, as well as the long ridgeline north of The Horn to Potato Nubble. No new ski area or other development would be allowed within the Trail corridor. Additionally, no access roads would be permitted across the Trail corridor. In total, this alternative would protect approximately 2,860 acres.

The Trail corridor boundary would be designed so that it would not conflict or interfere with construction of the proposed ski facilities that were conditionally approved by the Land Use Regulation Commission in 1989, including the Sundance and Upper Advanced ski lifts and associated ski trails.

Assuming a market exists for this level of expansion, the ski area could expand to approximately four times its current capacity by upgrading its existing facilities to industry standards and constructing the lifts that have been conditionally approved by the Maine Land Use Regulation Commission.

**Alternative #2: Protection of the Visual Foreground Zone as Seen from the Appalachian**

**Trail across Saddleback Mountain:** This alternative, which the National Park Service proposed to Saddleback Ski Area in 1996, would ensure the continuity of the footpath, protect the immediate Trail environs and virtually all of the alpine and subalpine areas of Saddleback Mountain, and protect an area that approximates the “visual foreground zone” identified using the U.S. Forest Service's Visual Management System. (See Map 2.3.)


Under this alternative, the Trail corridor would encompass Eddy Pond, portions of the southwest side of the mountain, the Maine Critical Area, and the upper portions of the “saddle bowl” between Saddleback and The Horn. A timber access road right-of-way would be retained by Saddleback Ski Area along the existing roadbed north of Eddy Pond. No new ski area or other development would be allowed within the Trail corridor. In total, this alternative would protect approximately 893 acres.

## Alternative #1


### Preservation of the Existing Appalachian Trail Experience Across Saddleback Mountain

#### LEGEND



 Appalachian Trail

 Saddleback Mtn/  
Franklin Timberland  
ownership



 NPS Land

 Alternative #1  
2860 acre acquisition

#### Ski runs

 Existing  
 Proposed

#### Ski lifts

 Existing  
 Proposed

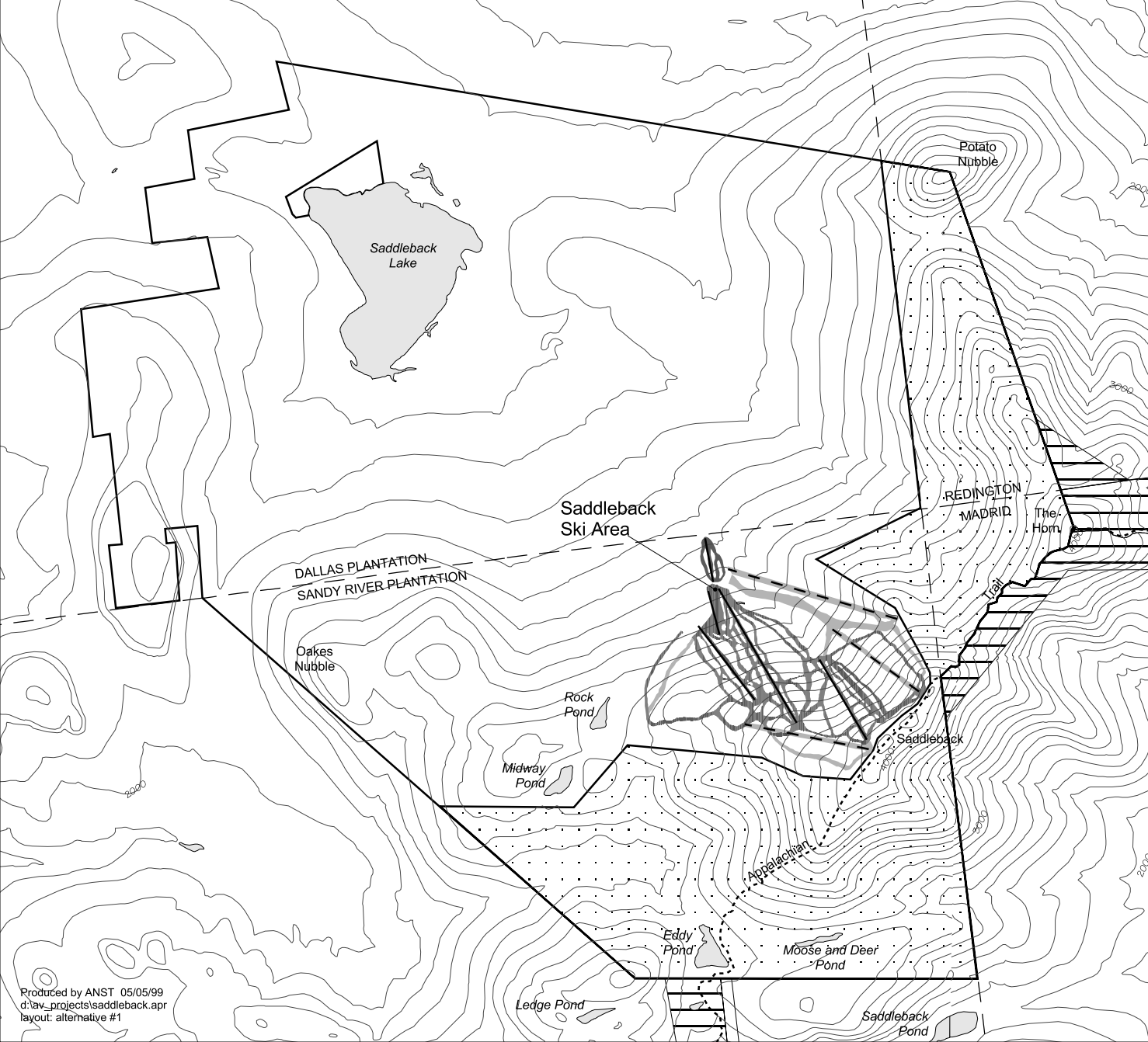


Contour interval = 100'

0 2500 5000 Feet











Map 2.2



## Alternative #2

### Protection of the Visual Foreground Zone as Seen From the Appalachian Trail on Saddleback Mountain

#### LEGEND

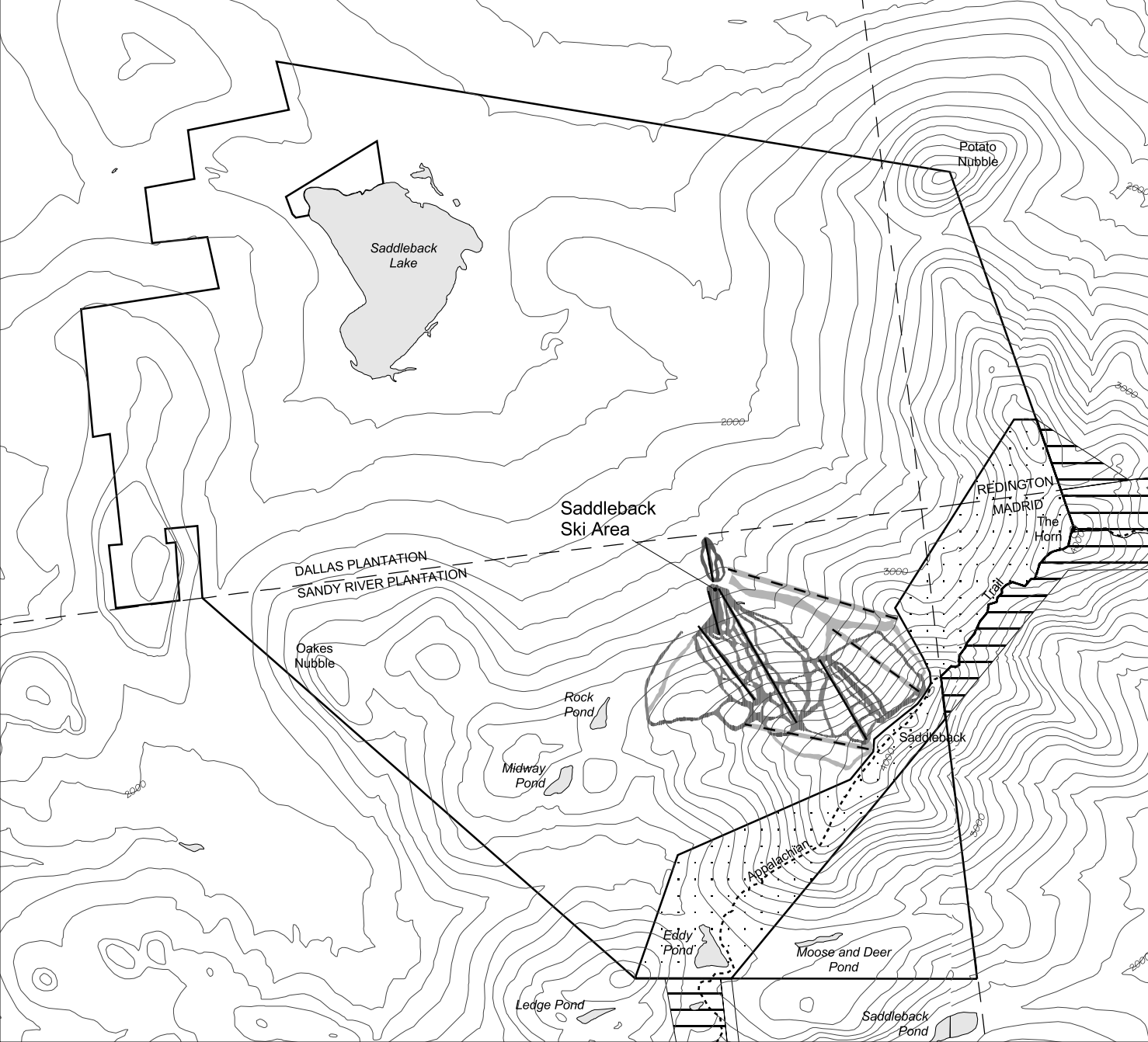
-  Appalachian Trail
-  Saddleback Mtn/  
Franklin Timberland  
ownership
-  NPS Land
-  Alternative #2  
893 acre acquisition
- Ski runs**
  -  Existing
  -  Proposed
- Ski lifts**
  -  Existing
  -  Proposed



Contour interval = 100'

0 2500 5000  
feet

Map 2.3



The Trail corridor boundary would be designed so that it would not interfere with construction of the proposed ski facilities that were conditionally approved by the Land Use Regulation Commission in 1989 and 1994, including the Sundance and Upper Advanced ski lifts and associated ski trails. Ski area expansion also could occur in the “saddle bowl” north and west of the Trail corridor.

Assuming a market exists for expansion, the ski area could expand to approximately nine times its current capacity by upgrading its existing facilities to industry standards, constructing the lifts that have been conditionally approved by the Maine Land Use Regulation Commission, and expanding its operations into the “saddle bowl” area outside the proposed 893-acre corridor.

**Alternative #3: Saddleback Ski Area Proposed Alternative:** In January 1998, Saddleback Ski Area proposed to donate to the National Park Service an interest in land that would affect approximately 350 acres. In April 1999, Saddleback Ski Area revised its proposal so that it would affect a 660-acre area as shown on Map 2.4. Under this alternative, Saddleback Ski Area would grant a passageway 500 feet in width where the Appalachian Trail is located on the property boundary and 1,000 feet in width where the Trail is located on Saddleback Ski Area lands. In addition, a large area around Eddy Pond would be available for primitive recreational uses. No ski lifts would be closer than 200 feet to the footpath of the Appalachian Trail, and no development would be permitted above a “mountain top tree line” defined by Saddleback Ski Area ranging from 50 to 400 feet in width. Snowmaking equipment and utilities would be buried within 50 feet of the footpath of the Appalachian Trail.





However, Saddleback Ski Area would retain extensive development rights *within* the passageway, including rights to:

- construct five new ski lifts, including three in the “saddle bowl” and two on the southeastern side of the mountain
- build, excavate, work, and grade terrain for ski trails, pipes, lifts, buildings, and other ski related facilities
- build and use structures, buildings, ski lifts, skiing trails, wind barriers, snowfencing, signs, snowmaking pipes and facilities, electrical, water, telephone, and utility lines and other recreational facilities
- cut and control trees and other vegetation as necessary
- conduct all other activities useful to the operation of a commercial ski area
- construct two ski trails, each less than 200 feet in width, across the Appalachian Trail footpath
- sponsor commercial recreation activities
- improve and use an access road, and construct and operate utility lines, water lines, snowmaking pumps, sheds, and other facilities within a 200-foot wide right-of-way
- dam and control water depths in Eddy Pond, and add to, store, and withdraw water from the pond
- construct, maintain, and use snowmaking sheds, pumps, pipelines, and other facilities

## Alternative #3

### Saddleback Ski Area's Proposed Donation





#### LEGEND

-  Appalachian Trail
-  Saddleback Mtn/  
Franklin Timberland  
ownership
-  NPS Land
-  Alternative #3  
660 acre acquisition

#### Ski runs

-  Existing
-  Proposed

#### Ski lifts

-  Existing
-  Proposed
-  Proposed upper  
lift towers for  
additional ski lifts  
within donated area
-  Proposed ski trail  
crossings of the A.T.



Contour interval = 100'

0 2500 5000  
feet

Map 2.4



The five ski lifts would terminate inside the donated area at the locations shown on Map 2.4. Saddleback Ski Area would reserve rights to cross the footpath of the Appalachian Trail with two ski trails that would, according to the ski area, provide access to ski terrain on the southeastern side of the mountain. These ski trails would intersect the footpath of the Appalachian Trail on the southwestern shoulder of the mountain below the alpine zone at the location shown on Map 2.4. The 200-foot right-of-way would cross the Appalachian Trail footpath at the location shown on Map 2.4.

The Trail corridor boundary under this alternative would be designed to exclude the proposed ski facilities that were conditionally approved by the Land Use Regulation Commission in 1989 and 1994. Ski area development also could occur outside the corridor on both sides of the mountain. Assuming a market exists for this level of expansion, the ski area could expand under this scenario to approximately eleven times its current capacity by upgrading its existing facilities to industry standards, constructing the lifts that have been conditionally approved by the Maine Land Use Regulation Commission, and expanding its operations into the “saddle bowl” area and the southeastern side of the mountain.

**Alternative #4: “Optimal” Ski Area Development Alternative:** In January 1999, the National Park Service requested Sno.engineering, Inc., to provide an alternative development scenario that in Sno.engineering’s best professional judgment represented the optimal ski area expansion on Saddleback Mountain absent any consideration being given for the National Park Service’s action to permanently protect the Appalachian Trail. Sno.engineering designed what they considered to be a design for optimal expansion of the ski area, based on the physical attributes and constraints of Saddleback Mountain and its environment. The National Park Service then designed a Trail corridor that would exclude the areas of the mountain that would be needed for the “optimal development scenario” provided by Sno.engineering.

Under this alternative, the National Park Service would acquire approximately 784 acres. This alternative would ensure the continuity of the footpath, protect the immediate Trail environs and the alpine and subalpine areas of Saddleback Mountain, and protect much of the visual "foreground" area identified using the U.S. Forest Service's Visual Management System. The corridor would encompass Eddy Pond, the Maine Critical Area, and most of the upper portions of the “saddle bowl” between Saddleback and The Horn. (See Map 2.5.) No new ski area or other development would be allowed within the Trail corridor. However, the Trail corridor would be designed to exclude an area below the Appalachian Trail as it passes through the “saddle” between Saddleback Mountain and The Horn, where a ski lift and several new ski trails could be constructed. Extensive ski area development also could occur on the western and northern slopes within the “saddle bowl” below 3,500 feet. A timber access road would cross the Appalachian Trail on the existing roadbed north of Eddy Pond.


## Alternative #4

### Optimal Ski Development Alternative


developed by  
**Sno. Engineering Inc.**

#### LEGEND



 Appalachian Trail

 Saddleback Mtn/  
Franklin Timberland  
ownership



 NPS land

 Alternative #4  
784 acres

#### Ski runs


 Existing  
 Proposed

#### Ski lifts

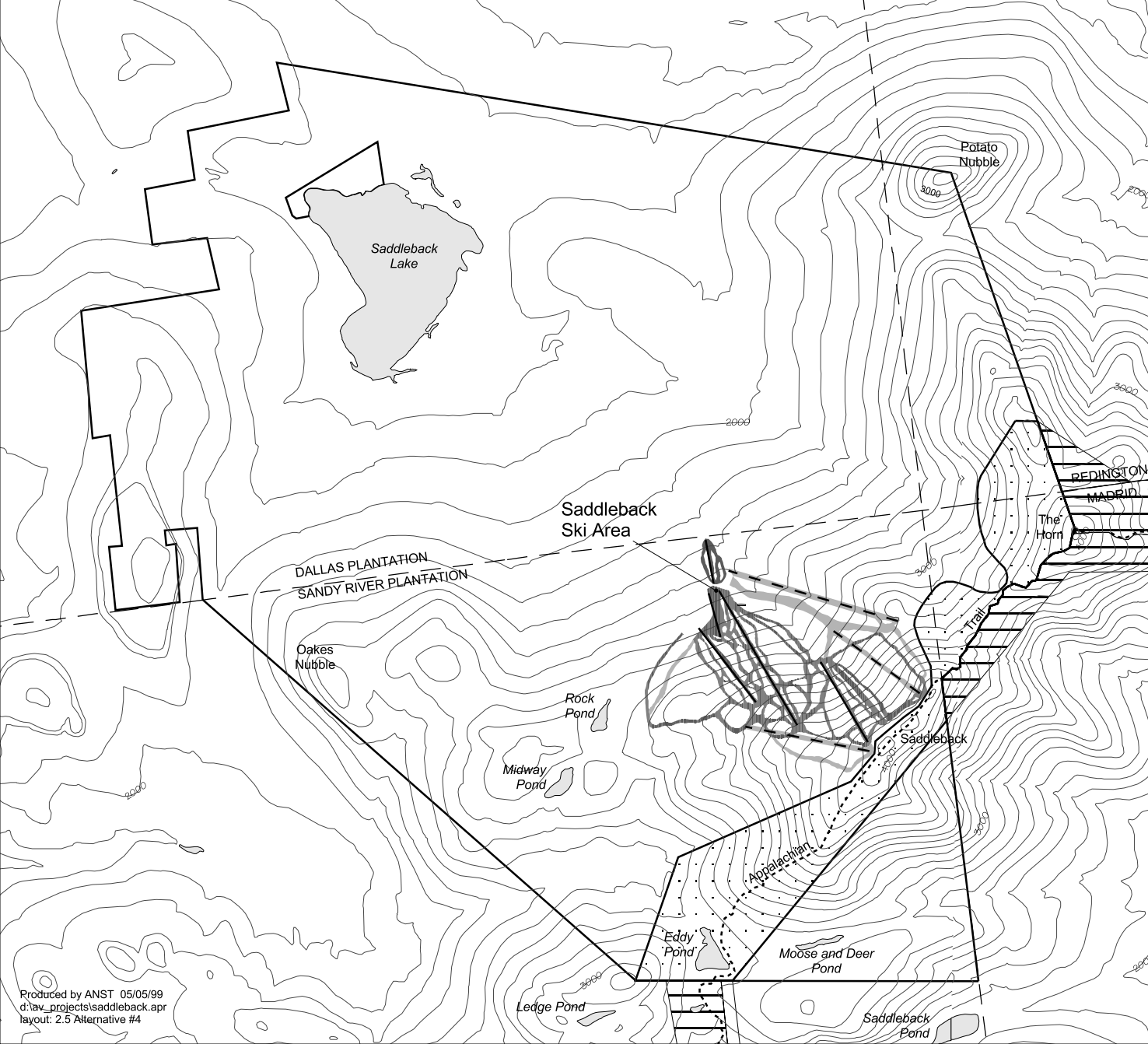
 Existing  
 Proposed



Contour interval = 100'

0 2500 5000 Feet  


Map 2.5



The Trail corridor boundary under this alternative would be designed so that it would not conflict or interfere with the proposed ski facilities that were conditionally approved by the Land Use Regulation Commission in 1989 and 1994, including the Sundance and Upper Advanced ski lifts and associated ski trails.

Assuming a market exists for this degree of expansion, the ski area could expand to approximately ten times its current capacity by upgrading its existing facilities to industry standards, constructing the lifts that have been conditionally approved by the Maine Land Use Regulation Commission, and expanding its operations into the “saddle bowl” area outside the 784-acre corridor.

**The “No-Action” Alternative:** Under the no-action alternative, the National Park Service would not acquire any interests in land for the protection of the Appalachian National Scenic Trail across Saddleback Mountain. This 3.5-mile section of the Appalachian National Scenic Trail would remain unprotected, making it the only section of the 2,160-mile Appalachian National Scenic Trail that would remain on private property without permanent protection. This action would not meet the direction of Congress provided in the National Trails System Act, which authorized and directed the Secretary of Interior, in consultation with the Secretary of Agriculture, to establish a permanently protected corridor for the Appalachian National Scenic Trail.

The Appalachian Trail could be closed at any time by the landowner. Construction, operation, and expansion of ski area facilities and other forms of development adjacent to and across the Appalachian Trail would be permitted subject to Maine Land Use Regulation Commission and other state and local agency regulations.

Assuming a market exists for expansion, the ski area could expand to at least eleven times its current capacity by upgrading its existing facilities, constructing the lifts that have been conditionally approved by the Maine Land Use Regulation Commission, and expanding its operations into the “saddle bowl” area and the southeastern portion of the mountain.

### **Alternatives Considered but Eliminated from Further Study**

In addition to the alternatives considered in detail and described above, several other alternatives were evaluated but eliminated from further consideration.

One alternative suggested during scoping was a proposal to acquire the entire Saddleback Ski Area property, which the owner has indicated is for sale. Though the National Park Service has the authority under the National Trails System Act for whole tract acquisition, this is an action beyond the scope of what is required for protection of the Appalachian Trail. As a result, this alternative has been eliminated from further consideration.

Another alternative suggested during scoping was a proposal to relocate the Appalachian National Scenic Trail off of Saddleback Mountain entirely. This action would remove the Appalachian Trail from its historic location across Saddleback Mountain, where it has been located since 1935. This action also

would place the Appalachian Trail outside the official right-of-way for the Appalachian Trail as selected and published on maps filed in the *Federal Register* on October 9, 1971, pursuant to Section 7(a)(2) of the National Trails System Act. In addition, from a practical standpoint, relocating the Appalachian Trail off of Saddleback Mountain would require relocating up to 20 miles of the Appalachian Trail corridor, disposing of thousands of acres of land that have been acquired for the Trail, and acquiring thousands of acres of land to provide for a new corridor of land to protect the Trail. As a result, this alternative has been eliminated from further consideration.

A number of other alternatives have been suggested that are variations of the four alternatives that are analyzed in detail in the assessment. The alternatives that are analyzed in this environmental assessment have been modified in several instances to incorporate suggested variations. In particular, Alternative #3 has been modified to reflect language proposed by Saddleback Ski Area regarding the interests that would be transferred to the National Park Service. Alternative #4 also closely approximates several alternatives that were proposed during scoping.

### **Mitigating Measures**

The following mitigating measures would reduce, but would not eliminate, the visual impacts of potential ski area development as seen from the Appalachian National Scenic Trail and other impacts to important natural resources. The analysis of the alternatives assumes that these measures would be incorporated into any proposal for ski area expansion. However, these measures would apply to ski area expansion outside the Appalachian Trail corridor only if agreed to by Saddleback Ski Area as part of negotiations or if required by the Maine Land Use Regulation Commission as part of a permit for ski area development at some point in the future.

1. New ski lifts and trails should be located to avoid, to the maximum extent feasible, direct line-of-sight views as seen from the footpath of the Appalachian National Scenic Trail. Computer-based visual simulations should be prepared for any proposed ski lift or ski trail that is in the foreground zone as viewed from the footpath of the Appalachian Trail, for the purposes of assessing the visual impacts of proposed development and developing mitigating measures that will reduce, to the extent feasible, the visual impacts of proposed ski lifts and ski trails as seen from the Appalachian Trail.
2. Design criteria for construction of any new ski area facilities or upgrading of existing facilities should be developed so that the color, size, shape, height, mass, texture, placement, and lighting of all facilities blend with the natural environment. All ski area facilities, including lift towers, bullwheels, chairs, lift-operator shacks, snow-making buildings, and other related facilities and structures, should be painted non-reflective colors that blend into the background. Ski lifts should be designed using bottom-drive terminals and best available technology to minimize the mass and height of upper lift terminals and towers.

3. Where soil conditions permit, snow-making lines and utilities should be buried within the clearing limits for ski trails or lifts. All above-ground snowmaking equipment visible from and in the foreground zone as viewed from the footpath of the Appalachian Trail should be adequately camouflaged or removed from May 1 to November 1.
4. Vehicular access should be limited to the areas used for ski trails and ski lifts. Vehicular access should be prohibited except for maintenance and operations purposes.
5. All signs, markers, snow fences, and other facilities and markings for skiers visible from the Appalachian Trail should be removed during the non-skiing season (May 1 to November 1).
6. Public use of all ski lifts above an elevation of 2,700 feet above sea level should be prohibited during the non-skiing season (May 1 to November 1).
7. All chairs on lifts above an elevation of 2,700 feet and visible from the Appalachian Trail should be detachable and should be removed during the non-skiing season (May 1 to November 1).
8. Vegetative clearing for new lift lines and ski trails should be designed with irregular shapes and edges that harmonize with existing landforms, slopes, and vegetation patterns.
9. No ski trail, ski lift, road, or utility line crossings of the Appalachian Trail footpath, other than those specifically identified by deed reservation, should be permitted.
10. A thorough analysis of the effects of winds and severe weather conditions should be conducted prior to clearing vegetation or constructing new ski-area facilities to determine if clearing of vegetation and construction and operation of the facilities would adversely affect remaining vegetation at higher elevations.
11. There should be no development of any kind in the alpine and protected subalpine zones as defined by the Maine Land Use Regulation Commission.
12. No soil disturbances should be allowed at elevations above 2,700 feet above sea level between September 15 and May 15 unless the proponents can demonstrate that they can successfully stabilize and revegetate the site under the harsh environmental conditions found at these higher elevations.
13. On-the-ground surveys should be conducted to define more accurately the location and extent of ecological communities and rare plants and animal populations. Specifically, further surveys should be conducted for Bicknell's thrush, a recently recognized separate species whose preferred habitat is in dense subalpine spruce-fir forest cover at elevations above 3,000 feet, and other rare plant and animal species with unique habitat requirements. Bird and small-mammal trapping surveys should be conducted to determine the presence or absence of

*Microtus chrotorrhinus* (yellow-nosed vole), *Picoides tridactylus* (northern three-toed woodpecker), *Sorex dispar* (long-tailed shrew), and *Synaptomys borealis* (northern bog-lemming). Should any sensitive species be identified, new construction should be redesigned to avoid impacts to these species and their habitat.

The following mitigating measures should be incorporated into the ongoing management and maintenance of the Appalachian Trail to minimize impacts associated with recreational use of the Trail:

1. Where evidence exists of widened or braided foot trails, measures should be taken to harden and define the footpath. These measures should include, as appropriate, construction of waterbars, scree walls, and other trail-definition and erosion control structures.
2. Educational and informational measures should be implemented to encourage hikers to stay on existing trails, in order to minimize the potential for disturbance of sensitive soils, plants, and natural communities. These measures should include, as appropriate, posting informational signs at trailheads and other points of access, disseminating educational materials emphasizing “Leave No Trace” principles, and implementing other programs designed to educate and inform hikers about impacts to sensitive natural resources.
3. On-the-ground surveys should be conducted to define more accurately the location and extent of ecological communities and rare plants and animal populations. Specifically, further surveys should be conducted for Bicknell’s thrush, a recently recognized separate species whose preferred habitat is in dense subalpine spruce-fir forest cover at elevations above 3,000 feet, and for other rare plant and animal species with unique habitat requirements. Bird and small-mammal trapping surveys should be conducted to determine the presence or absence of *Microtus chrotorrhinus* (yellow-nosed vole), *Picoides tridactylus* (northern three-toed woodpecker), *Sorex dispar* (long-tailed shrew), and *Synaptomys borealis* (northern bog-lemming). Should any sensitive species be identified, appropriate management actions should be taken to avoid impacts to these species and their habitat.